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PATENT TRADEMARK OFFICE

Docket No.: 7529/1F590-US1

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Ralph M. STEINMAN; Christian MUENZ

Serial No.: t/b/a/

Confirmation No.:

Filed:

Concurrently Herewith

For:

PROTECTIVE ANTIGEN OF EPSTEIN BARR VIRUS

**INFORMATION DISCLOSURE STATEMENT** 

Hon. Commissioner of Patents and Trademarks Washington, DC 20231

Sir:

In order to comply with 37 CFR 1.97 and 1.98, attached hereto is a copy of Form PTO-1449 and copies of the documents listed thereon.

In accordance with MPEP Sections 609 and 707.05(b), it is requested that each document cited (including any cited in applicant's specification which is not repeated on the attached Form PTO-1449) be given thorough consideration and that it be cited of record in the prosecution history of the present application by initialing Form PTO-1449 next to the document. Such initialing is requested even if the Examiner does not consider a cited document to be sufficiently pertinent to use in a rejection, or otherwise does not consider it to be prior art for any reason, or even if the Examiner does not believe that the guidelines for citation have been fully complied with. This is requested so that each document becomes listed on the face of the patent issuing on the present application.

The undersigned is also enclosing herewith a copy of a Search Report issued March 14, 2001 for the PCT counterpart of the present patent application (Application No. PCT/US00/22106), in which the presently disclosed references were cited. Since a translation of the Search Report is also enclosed, or the Search Report utilizes conventional codes to characterize each cited reference, it is believed that the applicants in the above-identified patent application have now met the "concise explanation" requirement of 37 C.F.R. 1.98.

This submission is filed within three months of the filing of the application.

The present Information Disclosure Statement is being submitted in compliance with 37 CFR 1.56, but the citation of such document is not to be

Serial No. t/b/a/

construed as an admission that such document is necessarily relevant or prior art. No representation is intended that the cited documents represent the results of a complete search, and it is anticipated that the Examiner, in the normal course of examination, will make an independent search and will determine the best prior art consistent with 37 CFR 1.104(a) and 1.106(b) and, in the course of each search, will review for relevance every document cited on the attached form even if not initialed.

It is believed that no fee is due. However, if the Commissioner determines that a fee is due, the Commissioner is hereby authorized to charge the above deposit account for any deficiency.

Early and favorable consideration is earnestly solicited.

Respectfully submitted,

Dated: February 8, 2002

Paul F. Fehlner, Ph.D. Registration No. 35,135 Attorney for Applicant(s)

DARBY & DARBY 805 Third Avenue New York, NY 10022 (212) 527-7700

SHEET <u>1</u> OF <u>2</u> (REV. 7-80)

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#### LIST OF REFERENCES CITED BY APPLICANT

(Use Several Sheets if Necessary)

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APPLICANT:

Ralph M. STEINMAN

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Concurrently Herewith

CONFIRMATION NO:

### **U.S. PATENT DOCUMENTS**

\*EXAMINER INITIALS

DOCUMENT

NUMBER

DATE

NAME

CLASS SUBCLASS FILIN

FILING DATE

## **FOREIGN PATENT DOCUMENTS**

\*EXAMINER INITIALS DOCUMENT

NUMBER DAT

DATE COUNTRY

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TRANSLATION

YES NO

1. 96 02563 A

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3. 2,180,193 A 12/29/1996 CA

# OTHER REFERENCES (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

# \*EXAMINER INITIALS

- 4. THOMSON, S.A. et al., "TARGETING A POLYEPITOPE PROTEIN INCORPORATING A MULTIPLE CLASS II-RESTRICTED VIRAL EPITOPES TO THE SECRETORY/ENDOCYTIC PATHWAY FACILITATES IMMUNE RECOGNITION BY CD4 + CYTOXIC T LYMPHOCYTES: A NOVEL APPROACH TO VACCINE DESIGN", Journal of Virology, Volume 72, No. 3, March 1998, pages 2246-2252.
- 5. KHANNA, R. et al., "TARGETING EPSTEIN-BARR VIRUS NUCLEAR ANTIGEN 1 (EBNA1) THROUGH THE CLASS II PATHWAY RESTORES IMMUNE RECOGNITION BY EBNA1 SPECIFIC CYTOXIC T LYMPHOCYTES: EVIDENCE FOR HLA-DM-INDEPENDENT PROCESSING", International Immunology, Volume 9, No. 10, October 1997, pages 1537-1543.

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SHEET <u>2</u> OF <u>2</u> (REV. 7-80)

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6. MURRAY, R.J. et al., "IDENTIFICATION OF TARGET ANTIGENS FOR THE HUMAN CYTOTOXIC T CELL RESPONSE TO EPSTEIN-BARR VIRUS (EBV): IMPLICATIONS FOR THE IMMUNE CONTROL OF EBV-POSITIVE MALIGNANCIES", Journal of Experimental Medicine, Volume 176, No. 1, July 1, 1992, pages 157-168.

7. DI NICOLA, M. et al., "GENE TRANSFER INTO HUMAN DENDRITIC ANTIGEN-PRESENTING CELLS BY VACCINIA VIRUS AND ADENOVIRUS VECTORS", Cancer Gene Therapy, Volume 5, No. 6, November 1998, pages 350-356.

8. KHANNA, R. et al., "VACCINE STRATEGIES AGAINST EPSTEIN-BARR VIRUS-ASSOCIATED DISEASES : LESSONS FROM STUDIES ON CYTOTOXIC T-CELL-MEDIATED IMMUNE REGULATION", Immunological Reviews, Vol. 170, August 1999, pages 49-64.

9. TARTE, K. et al., "DENDRITIC CELL-BASED VACCINE: A PROMISING APPROACH FOR CANCER IMMUNOTHERAPY", Leukemia, Vol. 13, No. 5, May 1999, pages 653-663.

10. MÜNZ, C. et al., "HUMAN CD4(+) T LYMPHOCITES CONSISTENTLY RESPOND TO THE LATENT ePSTEIN-bARR VIRUS NUCLEAR ANTIGEN EBNA1", Journal of Experimental Medicine, Volume 191, No. 10, May 15, 2000, pages 1649-1660.

11. BICKHAM, K. et al., "EBNA1-SPECIFIC CD4+ T CELLS IN HEALTHY CARRIERS OF EPSTEIN-BARR VIRUS ARE PRIMARILY TH1 IN FUNCTION", Journal of Clinical Investigation, Vol. 107, No. 1, January 2001, pages 121-130.

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